

Konica

SERVICE MANUAL

Model
IT-101
INNER EXIT TRAY

MARCH 2001

CSM-IT101

KONICA BUSINESS TECHNOLOGIES, INC.

IT-101
SERVICE MANUAL

MARCH 2001

Used on Konica 7035

IMPORTANT NOTICE

Because of the possible hazards to an inexperienced person servicing this equipment, as well as the risk of damage to the equipment, Konica Business Technologies strongly recommends that all servicing be performed by Konica-trained service technicians only.

Changes may have been made to this equipment to improve its performance after this service manual was printed. Accordingly, Konica Business Technologies, Inc., makes no representations or warranties, either expressed or implied, that the information contained in this service manual is complete or accurate. It is understood that the user of this manual must assume all risks or personal injury and/or damage to the equipment while servicing the equipment for which this service manual is intended.

Corporate Publications Department

CONTENTS

OUTLINE

IT-101 PRODUCT SPECIFICATIONS	1
[1] Type	1
[2] Functions	1
[3] Machine data	1
[4] Maintenance	1
[5] Machine environment	1
CENTER CROSS SECTION/ DRIVE SYSTEM DIAGRAM	2

UNIT EXPLANATION

CONVEYANCE/PAPER EXIT SECTION	3
[1] Composition	3
[2] Mechanisms	3
[3] Paper exit control	4
[4] Door open/closed detection control	4
[5] Tray paper exit switching control	5

DISASSEMBLY/ASSEMBLY

DISASSEMBLY/ASSEMBLY	6
[1] Removing and reinstalling the IT unit	6

DIAGRAMS

ELECTRICAL PARTS/CONNECTOR LAYOUT	7
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CONTENTS

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SAFETY PRECAUTIONS

Installation Environment

Safety considerations usually are directed toward machine design and the possibility of human error. In addition, the environment in which a machine is operated must not be overlooked as a potential safety hazard.

Most electrical equipment is safe when installed in a normal environment. However, if the environment is different from what most people consider to be normal, it is conceivable that the combination of the machine and the room air could present a hazardous combination. This is because heat (such as from fusing units) and electrical arcs (which can occur inside switches) have the ability to ignite flammable substances, including air.

When installing a machine, check to see if there is anything nearby which suggests that a potential hazard might exist. For example, a laboratory might use organic compounds which, when they evaporate, make the room air volatile. Potentially dangerous conditions might be seen or smelled. *The presence of substances such as cleaners, paint thinners, gasoline, alcohol, solvents, explosives, or similar items should be cause for concern.*

If conditions such as these exist, take appropriate action, such as one of the following suggestions.

- Determine that the environment is controlled (such as through the use of an exhaust hood) so that an offending substance or its fumes cannot reach the machine.
- Remove the offending substance.
- Install the machine in a different location.

The specific remedy will vary from site to site, but the principles remain the same. To avoid the risk of injury or damage, be alert for changes in the environment when performing subsequent service on any machine, and take appropriate action.

Unauthorized Modifications

Konica copiers have gained a reputation for being reliable products. This has been attained by a combination of outstanding design and a knowledgeable service force.

The design of the copier is extremely important. It is the design process that determines tolerances and *safety margins* for mechanical, electrical, and electronic aspects. It is not reasonable to expect individuals not involved in product engineering to know what

effect may be caused by altering any aspect of the machine's design. Such changes have the potential of degrading product performance and reducing safety margins.

For these reasons, *installation of any modification not specifically authorized by Konica Business Machines U.S.A., Inc., is strictly prohibited.*

The following list of prohibited actions is not all-inclusive, but demonstrates the intent of this policy.

- Using an extension cord or any unauthorized power cord adapter.
- Installing any fuse whose rating and physical size differs from that originally installed.
- Using wire, paper clips, solder, etc., to replace or eliminate any fuse (including temperature fuses).
- Removing (except for replacement) any air filter.
- Defeating the operation of relays by any means (such as wedging paper between contacts).
- Causing the machine to operate in a fashion other than as it was designed.
- Making any change which might have a chance of defeating built-in safety features.
- Using any unspecified replacement parts.

General Safety Guidelines

This copier has been examined in accordance with the laws pertaining to various product safety regulations prior to leaving the manufacturing facility to protect the operators and service personnel from injury. However, as with any operating device, components will break down through the wear-and-tear of everyday use, as will additional safety discrepancies be discovered. For this reason, it is important that the technician periodically performs safety checks on the copier to maintain optimum reliability and safety.

The following checks, not all-inclusive, should be made during each service call:

CAUTION: Avoid injury. Ensure that the copier is disconnected from its power source before continuing.

- Look for sharp edges, burrs, and damage on all external covers and copier frame.
- Inspect all cover hinges for wear (loose or broken).
- Inspect cables for wear, frays, or pinched areas.

- Ensure that the power cord insulation is not damaged (no exposed electrical conductors).
- Ensure that the power cord is properly mounted to the frame by cord clamps.
- Check the continuity from the round lug (GND) of the power cord to the frame of the copier – ensure continuity. An improperly grounded machine can cause an electrically-charged machine frame.

Safeguards During Service Calls

Confirm that all screws, parts, and wiring which are removed during maintenance are installed in their original positions.

- When disconnecting connectors, do not pull the wiring, particularly on AC line wiring and high voltage parts.
- Do not route the power cord where it is likely to be stepped on or crushed.
- Carefully remove all toner and dirt adhering to any electrical units or electrodes.
- After part replacement or repair work, route the wiring in such a way that it does not contact any burrs or sharp edges.
- Do not make any adjustments outside of the specified range.

Applying Isopropyl Alcohol

Care should be exercised when using isopropyl alcohol, due to its flammability. When using alcohol to clean parts, observe the following precautions:

- Remove power from the equipment.
- Use alcohol in small quantities to avoid spillage or puddling. Any spillage should be cleaned up with rags and disposed of properly.
- Be sure that there is adequate ventilation.
- Allow a surface which has been in contact with alcohol to dry for a few minutes to ensure that the alcohol has evaporated completely before applying power or installing covers.

Summary

It is the responsibility of every technician to use professional skills when servicing Konica products. There are no short cuts to high-quality service. Each copier must be thoroughly inspected with respect to safety considerations as part of every routine service call. The operability of the copier, and more importantly, the safety of those who operate or service the copier, are directly dependent upon the conscientious effort of each and every technician.

Remember...when performing service calls, use good judgement (have a watchful eye) to identify safety hazards or potential safety hazards that may be present, and correct these problem areas as they are identified -- the safety of those who operate the copier as well as those who service the copier depend on it!

IT-101 PRODUCT SPECIFICATIONS

[1] Type

Type: Built-in two-tier tray with paper exit guide gate

[2] Functions

Kinds of paper: 13 lb. to 43 lb. high-quality paper

Paper size

Small size: B6R, A5R, 5.5 x 8.5R

Medium size: B5, B5R, A4, A4R, 8.5 x 11, 8.5 x 11R, 5.5 x 8.5

Large size: A3, B4, F4, 11 x 17, 8.5 x 14

Maximum

Paper capacity: Upper tray: 50 sheets

Lower tray: 100 sheets

Note: The above capacities apply to when paper of the same size is stacked continuously.

[3] Machine data

Power source: DC24V/5V (supplied from the main body)

Maximum power Consumption: Maximum 6.5VA

Weight: 7.9 lb.

Machine dimensions: Length 16.9 in.
Depth 17.7 in.
Height 5.4 in.

[4] Maintenance

Maintenance: Same as the main body

[5] Machine environment

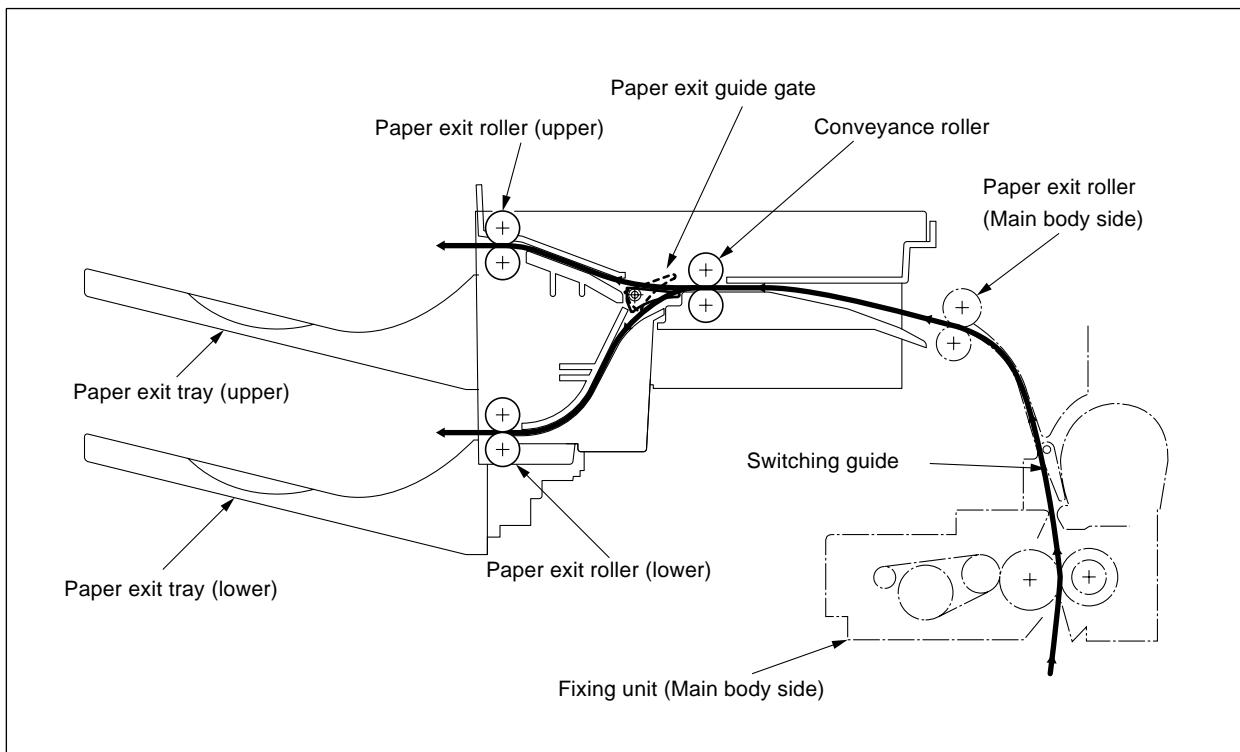
Temperature: 50 to 86°F

Humidity: 20 to 80%RH

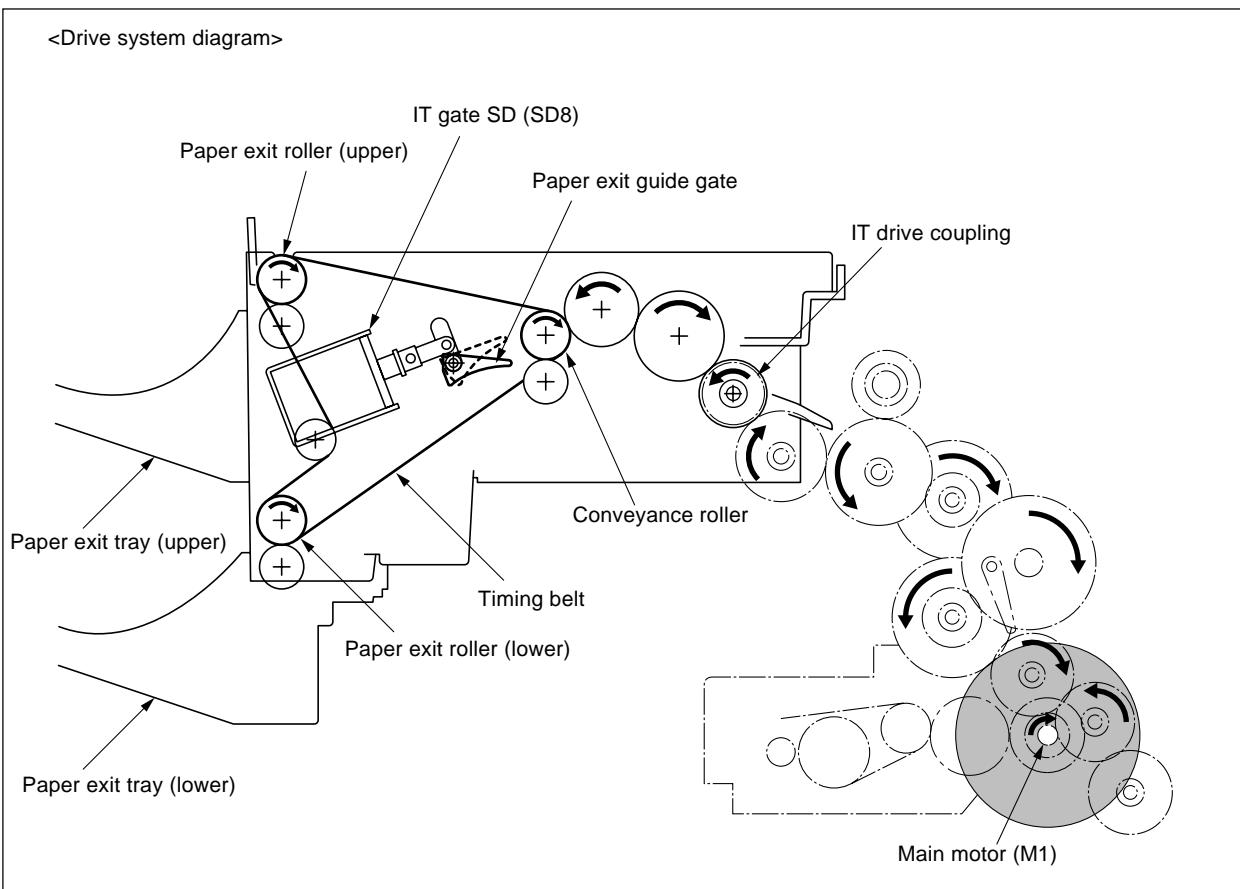
Note: Specifications are subject to change without notice.

CENTER CROSS SECTION / DRIVE SYSTEM DIAGRAM

<Center cross section>

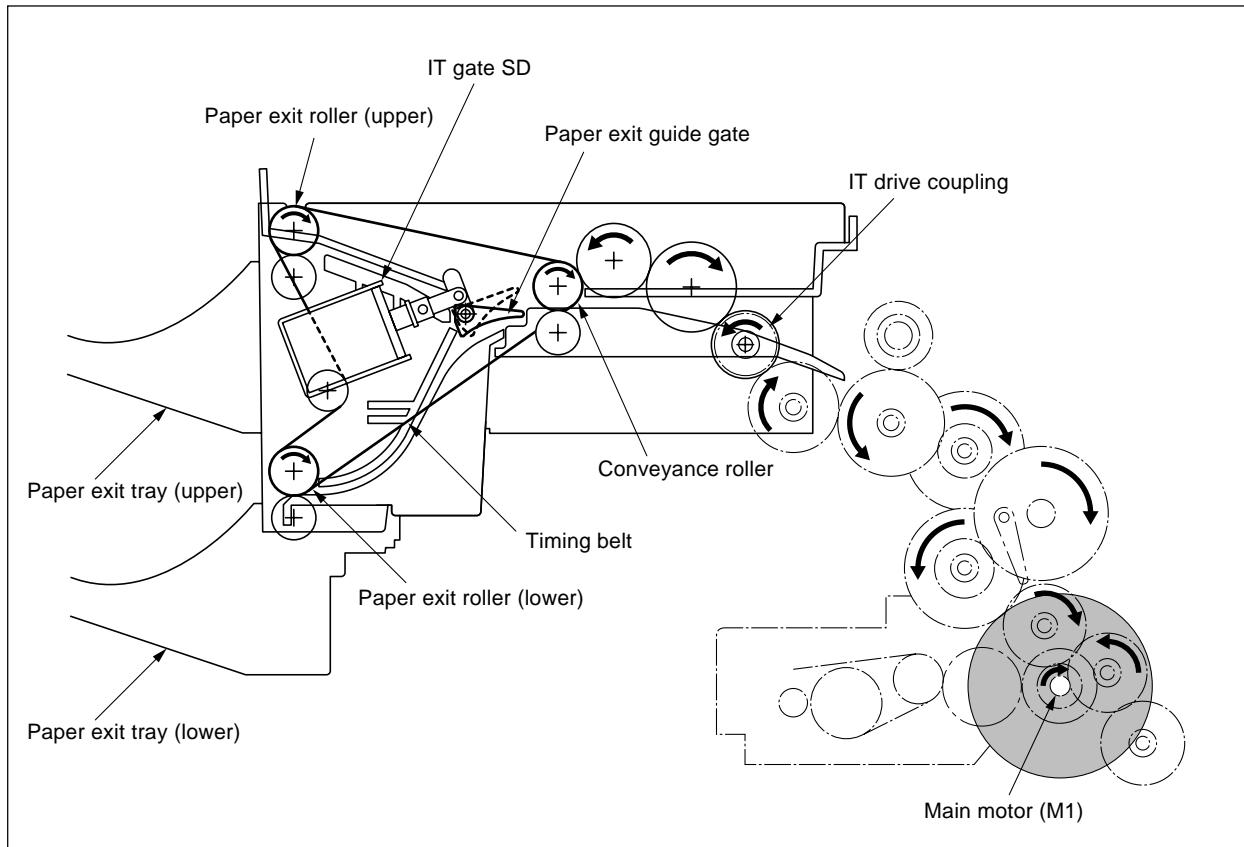


<Drive system diagram>



CONVEYANCE/PAPER EXIT SECTION

[1] Composition



[2] Mechanisms

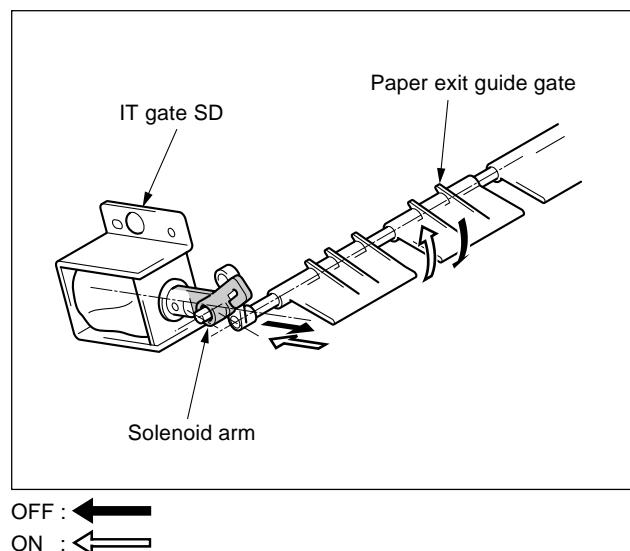
Mechanism	Method
Paper conveyance *1	Conveyance roller
Paper exit switching *2	Paper exit guide gate

*1: Paper conveyance

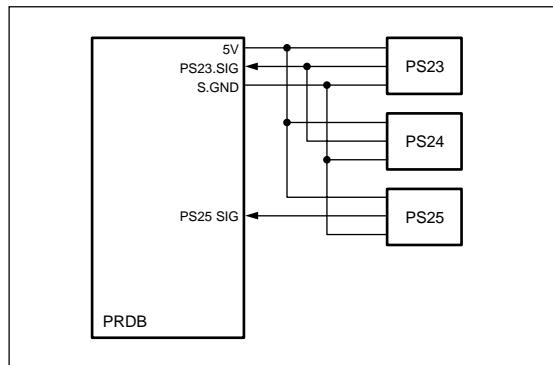
The paper conveyed from the fixing unit in the main body is conveyed to either paper exit roller (upper) or (lower) by the conveyance roller. The conveyance roller is driven by the main motor on the main body (M1), and driving power is transmitted to both paper exit roller (upper) and (lower) via a timing belt.

*2: Paper exit switching

The paper that is conveyed by the conveyance roller is exited to paper exit tray (upper) or paper exit tray (lower) by the paper exit guide gate. The upper exit guide gate is operated by the IT gate SD (SD8). If the IT gate SD goes ON, paper is ejected to paper exit tray (lower).



[3] Paper exit control



1. Operation

PS23 (IT exit PS (upper)) and PS24 (IT exit PS (lower)) detect whether paper has passed through within a predetermined period of time after it has passed through PS3 (paper exit PS) on the main body.

2. Signals

a. Output signals

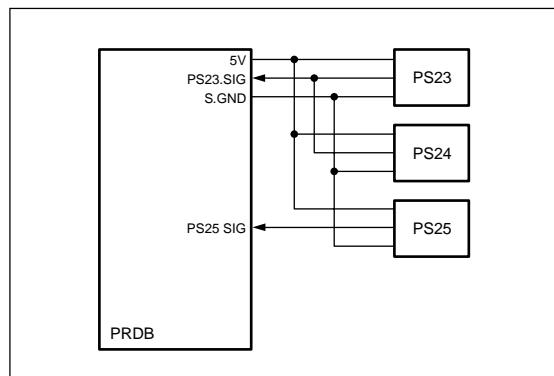
(1) PS23 SIG (PS23 → PRDB)

Paper exit (upper/lower) detection signal

[H] : No paper is present

[L] : Paper is present

[4] Door open/closed detection control



1. Operation

The open/close status of the IT door is detected in accordance with the ON/OFF status of PS25 (IT door).

2. Signal

a. Output signals

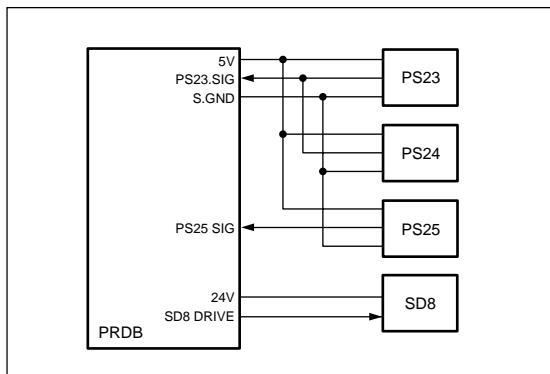
PS25 SIG (PS25 → PRDB)

IT door open / closed detection signal

[H] : Door closes

[L] : Door opens

[5] Tray paper exit switching control



1. Operation

SD8 (IT gate SD) is set at ON at the same time as the start button is set at ON when selecting the paper exit tray (lower), and PS24 (IT exit PS (lower)) is set at OFF when the end of the last piece of paper is detected.

2. Signals

a. Output signals

- (1) SD8 DRIVE (PRDB \Rightarrow SD8)

[H] : SD8 OFF

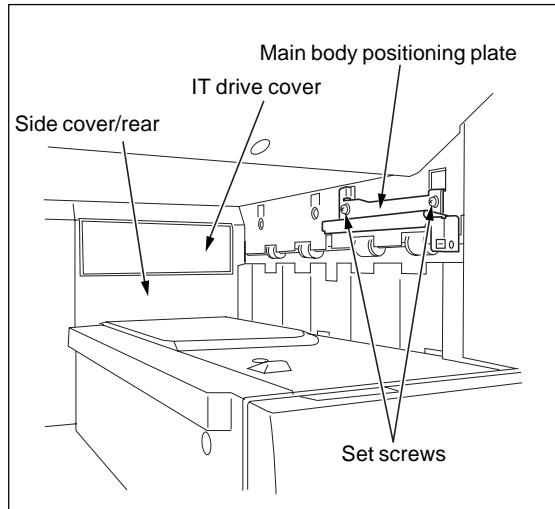
[L] : SD8 ON

DISASSEMBLY/ASSEMBLY

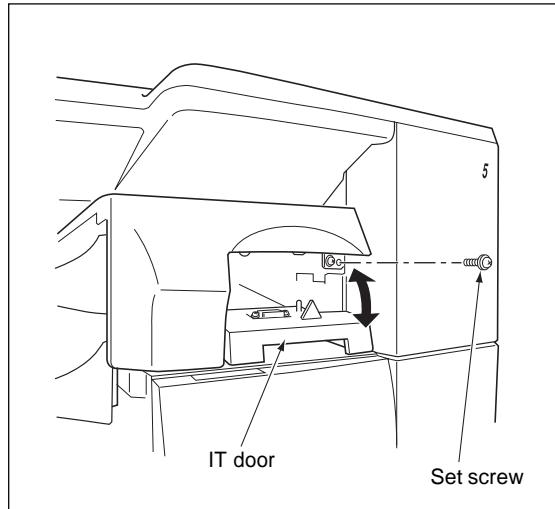
[1] Removing and reinstalling the IT Unit

Caution: Make sure the power plug is taken out of the socket.

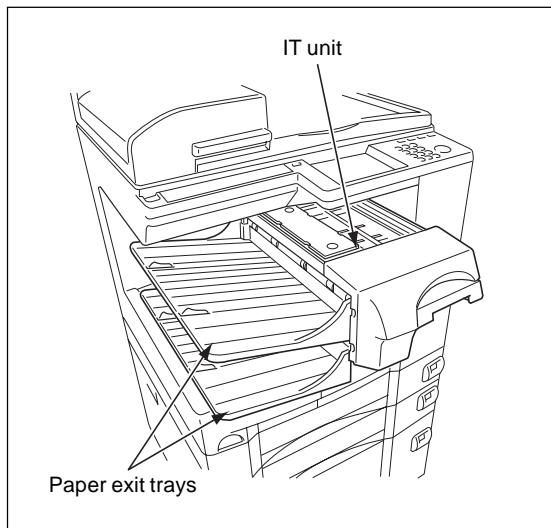
- (1) Use nippers or similar tool to cut off the side cover/rear then remove the IT drive cover from the side cover/rear on the main body.
- (2) Remove the two set shoulder screws of the main body, and then attach the main body positioning plate with the two set screws.



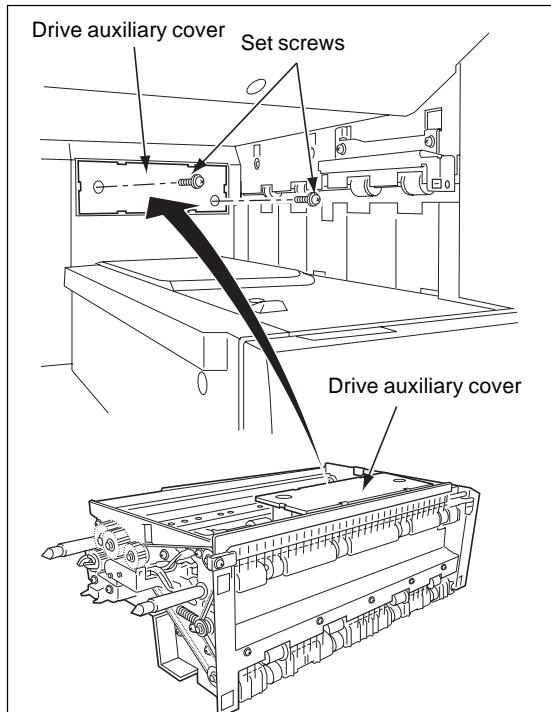
- (3) Open the IT door, attach the set screw, and then close the IT door.



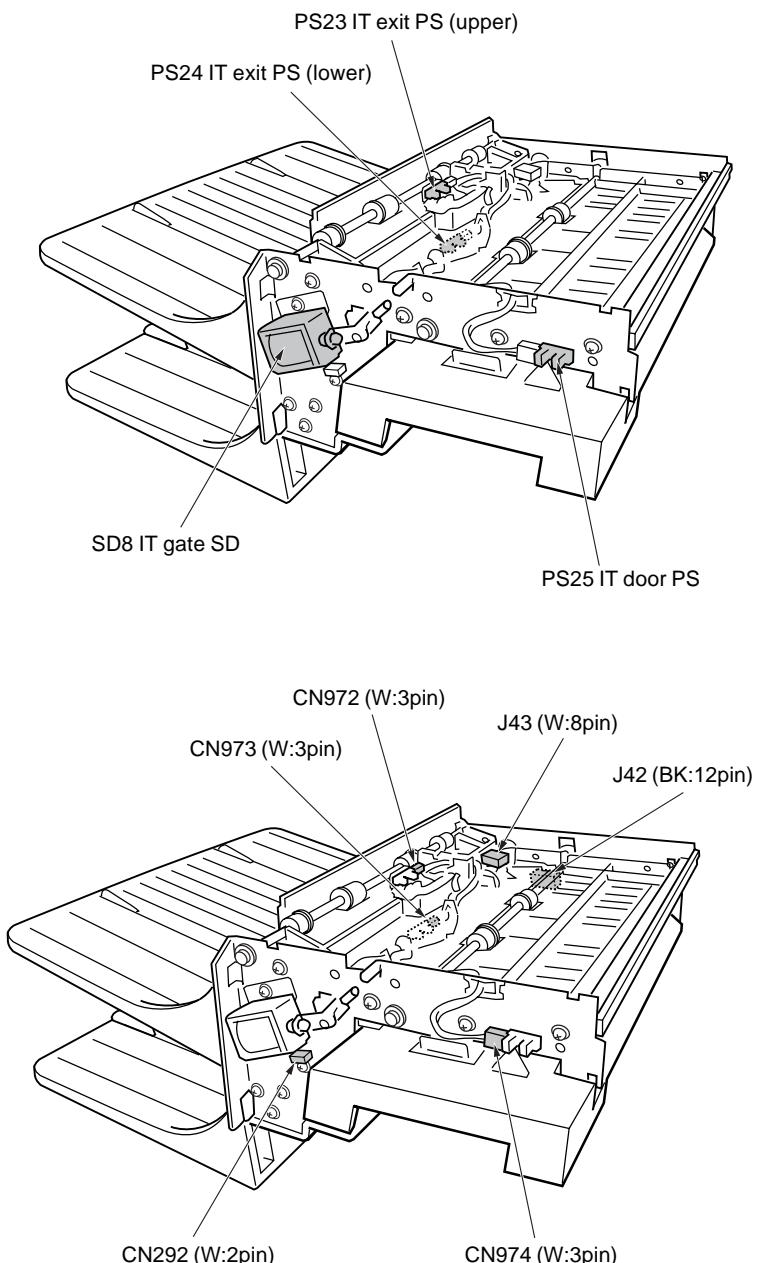
- (4) Attach the two paper exit trays to the IT unit after the IT unit has been attached to the main body.



- (5) Remove the inner tray unit in the opposite sequence to removal. When using a finisher, however, or when not using the IT unit continuously, be sure to install the drive auxiliary cover to protect the IT drive coupling.



IT-101 ELECTRICAL PARTS/CONNECTOR LAYOUT DRAWING



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PARTS CATALOG

**Model
IT-101**

MARCH 2001

KONICA BUSINESS TECHNOLOGIES, INC.

This parts catalog includes illustrations and part numbers for all replacement parts and assemblies used in this model.

Model-specific parts are identified in the illustrations with reference numbers. Use the reference number to locate the corresponding part number on the facing page.

Common hardware items, such as screws, nuts, washers, and pins, are identified in the illustrations with reference letters. Use the reference letter to locate the corresponding part number on the hardware listing in the lower right hand corner of the facing page.

If you know a part number, but don't know where the part is used, use the numerical index to determine the page number and reference number for that part. Because some common parts are used in several places, there may be more than one entry. Refer to the illustrations to see where the part may be used.

If you know a part's description, but don't know where to look to find the part number, use the alphabetical index to determine likely page and reference numbers. Then look at the illustrations to determine that you have identified the correct part. Locate the part number using the listing on the opposite page.

Retail pricing that appears with the numerical index, while valid when this catalog was printed, is subject to change without notice. The prices are only suggested prices and are provided only for reference. Dealers may determine their own selling prices. For up-to-date pricing, refer to current Konica price lists or contact the Konica Parts Distribution Center.

How to order parts

Use standard Konica parts ordering procedures to obtain these parts. For ordering options, contact Konica's Parts Distribution Center.

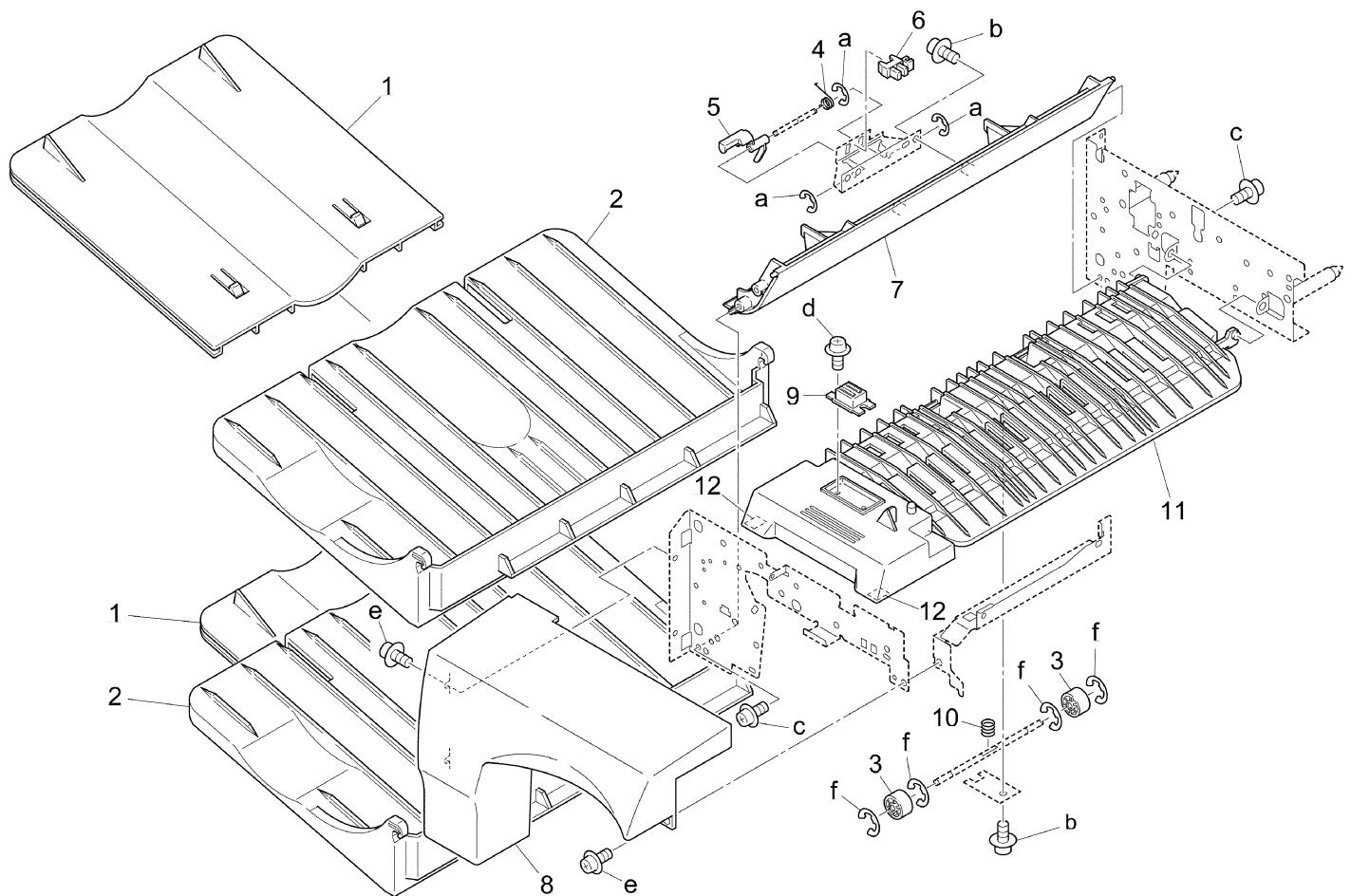
When ordering parts, be sure to specify part numbers exactly as listed in this catalog.

NOTE: Electrical parts may include previously used components.

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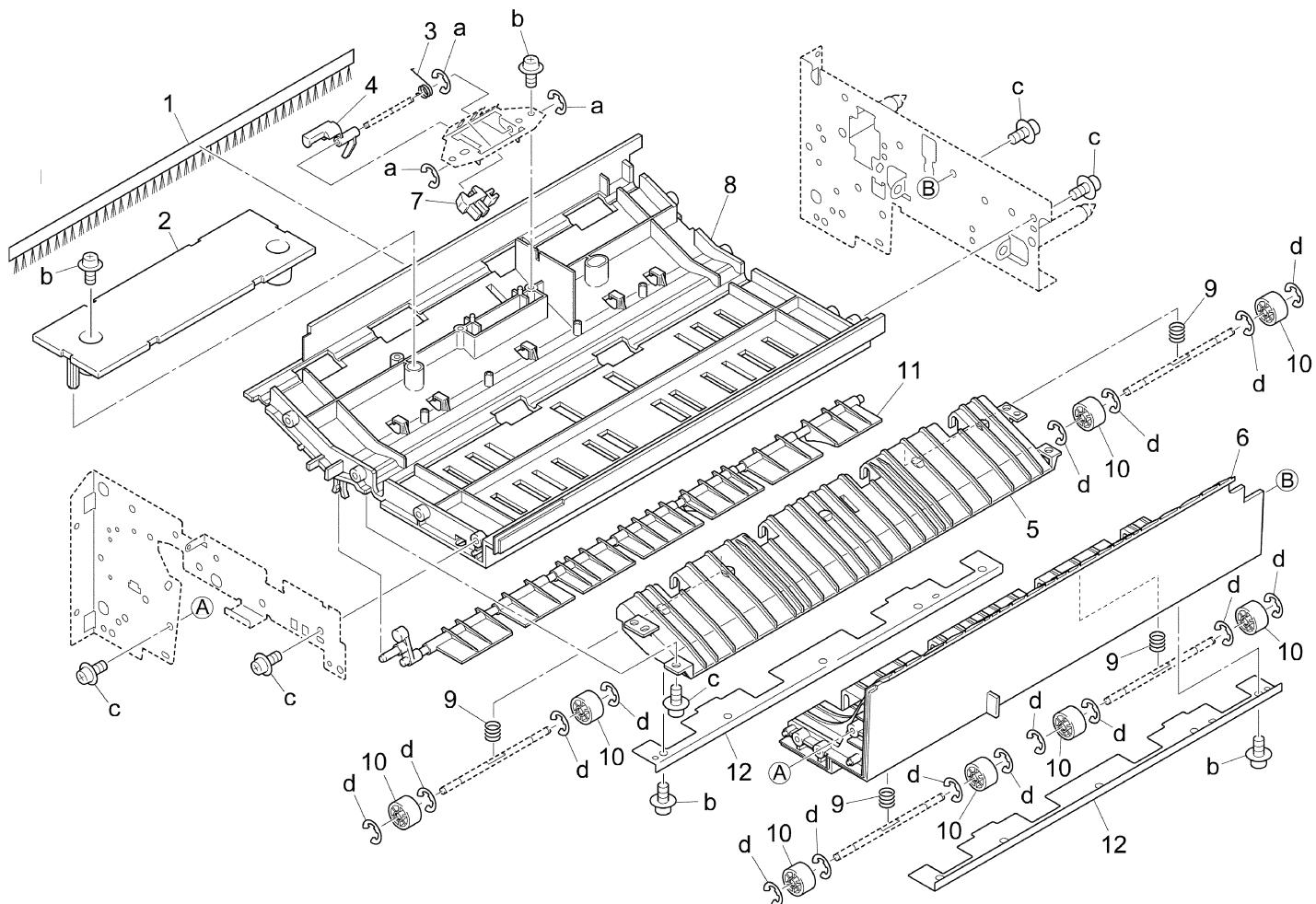
Contents

How to use this catalog	iii
Contents	1
IT-101	2
Wiring	8
Alphabetical index	11
Numerical index, Retail price list	13



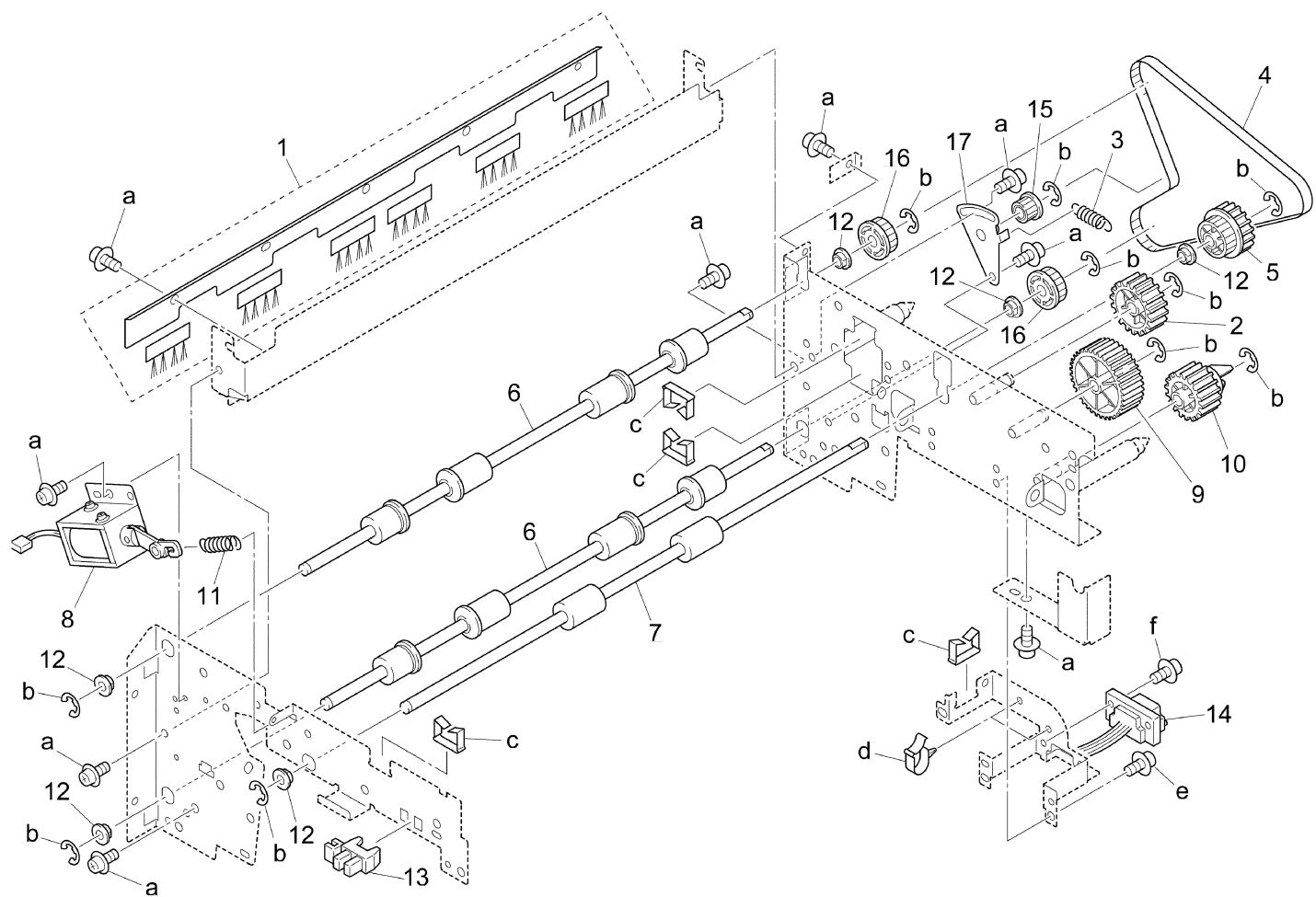
REF. NO.	PART NUMBER	DESCRIPTION
1	13NG12060	Paper exit tray/B
2	13NG12050	Paper exit tray/A
3	13NG45200	Conveyance driven roller
4	13NG45170	Pressure spring
5	13NG45150	Paper detecting actuator
6	08AA85510	Photosensor
7	13NG45030	Conveyance guide plate/Lower
8	13NG12010	Cover/Front
9	12AA12100	Magnet catch/A
10	13NG45220	Conveyance pressure spring/2
11	13NG12030	Open/Shut plate
12	12VG44430	Cushion/A

HARDWARE	
REF. LTR.	PART NUMBER
a	00Z670206
b	00Z253081
c	00Z254061
d	00Z243081
e	00Z193062
f	00Z670306



REF. NO.	PART NUMBER	DESCRIPTION
1	13NG48010	Neutralizing brush
2	13NG12020	Drive protection cover
3	13NG45170	Pressure spring
4	13NG45150	Paper detecting actuator
5	13NG45020	Conveyance guide plate/Upper
6	13NG45140	Conveyance casing/Lower
7	08AA85510	Photosensor
8	13NG45010	Conveyance casing/Upper
9	13NG45080	Conveyance pressure spring
10	13NG45200	Conveyance driven roller
11	13NG45040	Paper exit guide part
12	13NG45190	Paper exit pressure plate

HARDWARE	
REF. LTR.	PART NUMBER
a	00Z670206
b	00Z253081
c	00Z254061
d	00Z670306

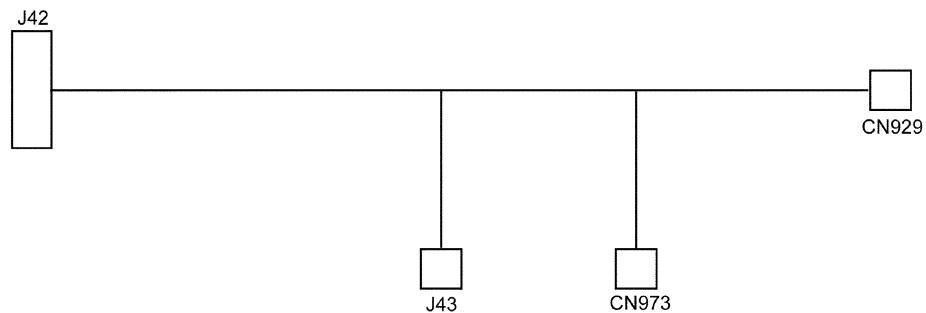


REF. NO.	PART NUMBER	DESCRIPTION
1	13NG-4870	Wiring cover/B assembly
2	35EA77080	Agitating gear
3	26NA51030	Tension spring
4	26TA17140	Belt
5	13NG15040	Conveyance pulley
6	13NG45060	Paper exit roller
7	13NG45050	Conveyance roller
8	13NG-4510	Solenoid assembly
9	25HA77070	Gear/G
10	13NG15010	Input gear
11	26NA48110	Tension spring
12	466076020	Paper feed shaft holder
13	08AA85510	Photosensor
14	13NG90010	Option wiring
15	13NG15050	Tension roller
16	26NA50430	Conveyance pulley/B (Z=28)
17	26NA-5140	Tension plate caulking

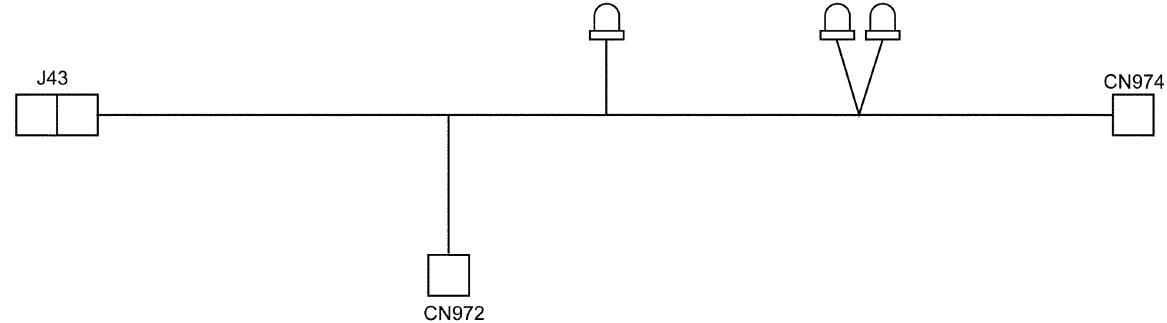
HARDWARE	
REF. LTR.	PART NUMBER
a	00Z193061
b	00Z670406
c	00Z921330
d	00Z926904
e	00Z193043
f	00Z193081

Wiring

①



②



REF. NO.	PART NUMBER	DESCRIPTION
1	13NG90010	Option wiring
2	13NG90020	Option wiring/2

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Alphabetical index

PART DESCRIPTION	PAGE NO.	REF. NO.	PART DESCRIPTION	PAGE NO.	REF. NO.	PART DESCRIPTION	PAGE NO.	REF. NO.
A			G			P		
Agitating gear	7	2	Gear/G	7	9	Paper exit pressure plate . . .	5	12
B			I			Paper exit roller	7	6
Belt	7	4	Input gear	7	10	Paper exit tray/A	3	2
C			M			Paper exit tray/B	3	1
Conveyance casing/Lower .	5	6	Magnet catch/A	3	9	Paper feed shaft holder . . .	7	12
Conveyance casing/Upper .	5	8	N			Photosensor	3	6
Conveyance driven roller .	3	3	Neutralizing brush	5	1	Photosensor	5	7
Conveyance driven roller .	5	10	O			Photosensor	7	13
Conveyance guide plate/Lower	3	7	Open/Shut plate	3	11	Pressure spring	3	4
Conveyance guide plate/Upper	5	5	Option wiring	7	14	Pressure spring	5	3
Conveyance pressure spring .	5	9	Option wiring	9	1	T		
Conveyance pressure spring/2	3	10	Option wiring/2	9	2	Tension plate caulking . . .	7	17
Conveyance pulley	7	5	P			Tension roller	7	15
Conveyance pulley/B (Z=28)	7	16	Paper detecting actuator . .	3		Tension spring	7	3
Conveyance roller	7	7	Paper detecting actuator . .	5		Tension spring	7	11
Cover/Front	3	8	Paper exit guide part	5	11	W		
Cushion/A	3	12				Wiring cover/B assembly . .	7	1
D								
Drive protection cover . . .	5	2						

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Numerical index

PART NUMBER	PAGE NO.	REF. NO.	PART NUMBER	PAGE NO.	REF. NO.	PART NUMBER	PAGE NO.	REF. NO.
08AA85510 . . .	3	6	13NG45010 . . .	5	8	13NG45220 . . .	3	10
08AA85510 . . .	5	7	13NG45020 . . .	5	5	13NG48010 . . .	5	1
08AA85510 . . .	7	13	13NG45030 . . .	3	7	13NG90010 . . .	7	14
12AA12100 . . .	3	9	13NG45040 . . .	5	11	13NG90010 . . .	9	1
12VG44430 . . .	3	12	13NG45050 . . .	7	7	13NG90020 . . .	9	2
13NG-4510 . . .	7	8	13NG45060 . . .	7	6	25HA77070 . . .	7	9
13NG-4870 . . .	7	1	13NG45080 . . .	5	9	26NA-5140 . . .	7	17
13NG12010 . . .	3	8	13NG45140 . . .	5	6	26NA48110 . . .	7	11
13NG12020 . . .	5	2	13NG45150 . . .	3	5	26NA50430 . . .	7	16
13NG12030 . . .	3	11	13NG45150 . . .	5	4	26NA51030 . . .	7	3
13NG12050 . . .	3	2	13NG45170 . . .	3	4	26TA17140 . . .	7	4
13NG12060 . . .	3	1	13NG45170 . . .	5	3	35EA77080 . . .	7	2
13NG15010 . . .	7	10	13NG45190 . . .	5	12	466076020 . . .	7	12
13NG15040 . . .	7	5	13NG45200 . . .	3	3			
13NG15050 . . .	7	15	13NG45200 . . .	5	10			

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